Charles Laird, Bath, Ontario.

September 23, 1893.

Fish Dealer here for 20 years, and has also fished some within that time.

As to whitefish, salmon trout, pike and pickerel, there has not been more than 1/4 the usual catch this year.

But bass have been more abundant than usual.

Right years ago there were more whitefish taken than ever.

Whitefish always spawn on the north shore, wherever it may be. On the north side of the Bay of Quinte, throughout most of its length; off the south side of Amherst Island; off Bath Point (just east of Bath); on Roses Bar (just west of Bath, about 1/2 mile); and on High Bank, facing the township of South Fredericks-burg, opposite the Upper Gap.

In all places, the whitefish spawn on hard gravelly bottom; in 2 to 5 feet of water. They always come into shoal water for this purpose. The spawning season begins about November 1, and continues until last of November, but the main body spawns during a period of only about 4 or 5 days. Can see them plainly while they are on these spawning grounds. Has never noticed the whitening of the water with their spawn, and has never seen the eggs.

They are very thin just after spawning, but fatten up rapidly.

As soon as they are through spawning they go back into deep water.

The fishing for whitefish is carried on in depths of 40 to 200 feet. Forty feet is about as shallow water as they come into except whilespawning and in June. They live on mud bottom in the spring, and until June. During June they come into certain sandy places having

a depth of 5 to 20 feet, remaining there only about 1 to 2 weeks. This is near the shore, where they can be seen, and they are said to come to these places in order to scour their scales of the mucous or scum which gets on to them in the mud.

They retreat from the sand to the deep water muddy grounds, where they remain until the spawning season.

Immense quantities come onto the sand shoals in June, and they are then in excellent condition, and as large as elsewhere.

Big Bar, south of Amherst Island, but they would not mesh. Unlike the whitefish, they will go to spawn on either shore, providing the conditions are suitable. They spawn on Big Bar, and all along at the head and foot of Amherst Island; on 8 to 10 feet of water, small grave, bottom. Begin to spawn about beginning of November and may spawn during all the month.

Salmon trout are fished for in the same depth of water as the whitefish and even deeper

The average weight of the salmon trout at present is about 6 pounds.

Salmon trout rarely come into the bays in summer, --only a few. In winter, however, a great many come in, chasing the herring, about the last of December, when the ice is beginning to form. They go up the Bay of Quinte about 6 miles above the Upper Gap. They remain more or less until into May, and are therefore more abundant about here in the winter than at other times, but not many are caught as they do not fish for them. When they leave they go out the lower gap.

The whitefish do not come in the same way, and do not feed on herring.

Sport fishing is as good now as ever.

Bass do not bite as well as they used to.

They are abundant, but they feed on the small

"shad" and that induces them not to take bait.

There is no market business in bass.

Only a very few are taken by hook and line for the market.

Pike will spawn anywhere on mud bottom in shallow water, even in ditches and on marshes. The season is the last of April. They prefer muddy, grassy or weedy bottoms.

Late in the fall, during the winter, and early in the spring he buys a good many pike, but only a very few in the summer. He can sell all that are brought in. They are abundant in many places, but not many are taken in this district. He gets them from adjacent districts. They are caught in gill nets.

Many pickerel are marketed. (They distinguish 3 or 4 varieties, apparently differing only slightly). The main ground near at hand is in the Lower Gap. They are also taken up through Bay of Quinté and in Hay Bay. They are caught in gill nets, and are very hard on the nets, using them up very badly.

They are taken all the summer up to about September 1, when they drop off. They begin again in November, coming in with the whitefish and continue present through the winter.

They range in size from 2 to 10 pounds, and sometimes attain 12 or 15 pounds. Does not think they feed on whitefish spawn. They feed largely on herring and "shad."

Bullheads do not occur much in this district, and are not caught. They are taken in Lennox District.

This is the first year they have done much in the market with perch and suckers, and only a moderate quantity has been marketed.

They are not much thought of, but in the scarcity of better fish this year, they have been in some demand. They occur between Amherst Island and the mainland, and on the outside of the island. They are abundant. Are caught in pike nets. Were taken mainly during July and August.

Very little sturgeon fishing in this district. Used to take sturgeon here in nets specially made for that purpose. They were gill nets, with 7 or 8 inch bar. All taken now are caught with hooks.

Rels are caught by means of hooks, a few around Amherst Island, but mostly in Hay Bay. The smallest which he has seen probably have not measured less than 12 to 15 inches. They range up to 5 and 6 pounds, the largest occurring in Hay Bay. They are captured mostly in the summer, but are seen in the winter, when they lie mostly buried in the mud.

between Amherst Island and the mainland, and they used to take them in the nets. Has not seen any in the bay for 10 or 15 years, but they could not have decreased on account of having been caught up. They now catch them off South Bay Point, out in the lake, but they are not marketed.

Mr. Laird acts as a buying agent for the Lake Ontario Fish Co. at Cape St. Vincent.

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Nelson Instant, Amherst Island, opposite
Bath, Ontario. September 23, 1893.

Farmer and fisherman, and a very intelligent well-to-do man.

The fishery for whitefish and salmon trout, on the outside of Amherst Island is carried on to a distance of 5 to 7 miles from land when the weather is suitable, but at other times not so far off. The principal fishermen fish outside of the island and in the upper gap. They do not pay much attention to the waters inside of the island.

During the past 30 to 40 years thinks that, on the whole, there has been a decrease in the abundance of salmon trout and whitefish.

There, are, however, cycles of good fishing, followed by periods of poor fishing, and the fishing during the past 10 years has probably been as good, on the whole, as during the previous 10 years.

The periods of good fishing seem to last from 3 to 5 years, followed by periods of 2 or 3 years of bad fishing.

The past year has been very bad, the previous one was better, but not very good.

Two and three years ago the fishing was exceedingly good.

The above remarks apply to whitefish and trout. The fishermen in this region do not pay much attention to other species.

He is firmly of the opinion that the "shad" (planted) are ruining the schools of whitefish and salmon trout, as they devour the fry.

The salmon trout deposit their eggs the last of October, and the first part of November. Has seen them doing so the 28th of October.

The whitefish spawn about 1 month later. The salmon trout eggs hatch the last part of March and first part of April; the whitefish eggs somewhat later.

These two species belong to the deep water and the fry go immediately to deep water, where the shad are at that season. The latter eat the fry. He has taken them with the fry in their mouths, and has seen them in the stomachs

(The above story would require much more evidence to make it creditable. How does he know that the fry are of the whitefish or salmon trout, etc?)

The "shad" come into shoal water in June, the season varying somewhat. Thinks they come in for the purpose of spawning. Has seen them doing so, and describes the habit as follows:

The spawning takes place right along the shores, in depths of 1 and 2 feet, and perhaps also deeper. They come in in compact schools, and circle around for sometime. Then they seem to mix all up together in a confused movement, after which they settle to the bottom, but soon afterwards come up again.

It is just after this that they come to the

surface, and die in such large quantities.

Has found their spawn on the bottom, he claims. It is very small, not glutinous like frog spawn, but a few eggs, 3 or 4, seem to stick together. It is most like pike spawn.

Salmon trout spawn on the bars on gravelly and shell stone bottoms, (The latter made up of honeycombed or perforated stones), in depths of 6 to 40 feet; only to a very slight extent inside of the island, but mainly on such places as Big Bar, off the outer side of Amherst Island. Spawn to a distance of 3 miles off this island.

Whitefish spawn more inshore. Never knew them to spawn on Big Bar; but they do extensive.

ly all through the Bay of Quinte up to and above Belleville. Also off the south side of Amherst Island. The bottom preferred seems to be gravel lying on clay er sand.

The close season for these 2 species is

the month of November. Only an odd salmon trout spawns in advance of this period, or after it. The height of the spawning season is during this month, and continues for only 3 or 4 days, warying somewhat in time in different years.

Whitefish spawn all through November, reaching the height about November 20. Some odd ones will spawn later than November 30.

The 2 principal fishing stations in this district are Bluff Point at the head of the island, and Drain's Point, at the southwest corner of the island. The remainder of the fishermen are scattered along the shores.

Whitefish nets are set on mud bottom, in depths of 60 to 125 feet, and even 150 feet.

It would not do to set them on rocky bottoms.

They are a very delicate net, made of very fine thread-like twine. They have a 4 1/2 inch mesh (stretched), are 12 meshes deep, and are sunk to the bottom. Each man is supposed to

have 100 rods, of which 50 rods will be in use at a time, and 50 rods kept on shore. However some do not possess more than 50 rods altogether

The nets are set principally off the south side of Amherst Island, between Timber Island and the False Ducks. Also set to some extent in the upper gap. The total area over which they set is not a large one.

The average size of the whitefish at present is  $1 \frac{1}{2}$  to 2 pounds.

Any whitefish under  $1^{-1}/2$  pounds will go through the  $4^{-1}/2$  inch mesh now used. A fish weighing  $1^{-3}/4$  pounds would go through the 5 inch mesh, which the law prescribes shall be the minimum, beginning next year.

Thinks the law should not be changed to 5 inch mesh. In case it is enforced they will lose a large proportion of the fish in this region, and the extent and value of the fishery will be greatly reduced. It will scarcely pay and many will have to give it up.

Salmon trout are not taken altogether on the same bottoms as the whitefish.

For salmon trout they use 6 to 7 inch
mesh. In this region are caught only in
October in depths of 6 to 40 feet, on and
about Big Bar, a rough shoal off the south
side of Amherst Island. It is at this time
that they come in preparatory to spawning.
At other times they are in deeper water, and
they do not take them from here.

At the Duck Islands, however, they fish a good part of the season from early in the spring to the last of July. They then disappear from there. He has heard that in that region they fish sometimes in as deep water as 150 to 180 feet.

In this district they catch a few pike in the spring, but in the whole district the entire pike fishery is very inconsiderable.

His sons sometimes use some of their old gill nets for this purpose, but it is with them only

an incidental matter.

Do not fish for bass or pickerel for market, unless it may be on a very small scale.

The amount of pickerel about here is inconsiderable.

Most of the fish caught about here goes to the Lake Ontario Fish Co., at Cape Vincent.

The gill nets are Scotch made, and are generally purchased in Toronto. The side lines, which are of cotton, come from the United States.

There is only one man, so far as he knows, who fishes for bullheads in this district.

There are not enough suitable places such as marshes, to lead to an extensive fishery for them.

Very little sturgeon fishing,. Knows of only one man who fished this year, and he had secured only 4 sturgeon.

There is no hook and line fishing here except for sport.

The channel cat and the cusk are very rare about here.

The Americans have good salmon trout fishing on Newfoundland Shoals, Charity Shoals, and off the Head of Bear Point, head of Wolfe Island.

Does not know whether the best grounds for salmon trout are on the American or Canadian side of the lake.

As regards whitefish, have altogether the best grounds on the Canadian side.

Cisco or "real herring" are rare about here now. Used to be more abundant, but the "shad" are driving them away. They have been caught in little nets, for use as bait, as for sturgeon fishery.

Blue back herring, resemble the whitefish, but do not have quite the same shape. They are thicker toward the tail and have narrow dark streaks down the sides. They follow in with the whitefish, but only an odd one taken

in that connection.

Bloaters resemble the cisco, but are bloated or distended back of the gills, and their body then narrows down quite small to the tail. Do not find many on this side of the lake. They seem to keep more to the American side. They are not good unless eaten within 2 hours after catching as they spoil rapidly.

Spoke of the discontent among the sport fishermen who come here, at the use of nets by the market fishermen, the former alleging that the latter are spoiling their bass fishing. They see the few buoys set in one place or another, and complain that the nets are set, but they do not realize in what depths or what is actually taken by them. He said that all the net fishermen together in this district do not catch over 100 pounds of bass a season. Only an odd one of this species will mesh in the gill nets.

Bass are getting more plentiful every year

Thinks pike are also on the increase, from

what he has heard of the catch made along the

shore.

Knows little about pickerel, and the same as to bullheads.

(We saw in his possession the jaws of a maskinonge, weighing 45 pounds, and about 4 feet long, which he had taken by trolling a few years ago. The haws were very stout and heavy. The teeth few, long, stout and sharp.)

As a whole, there is not nearly as good market fishing (whitefish and salmon trout) as there was 30 or 40 years ago. Nevertheless there are the recurring periods of good and bad fishing previously described.

Thinks it is wise to have a close season for salmon trout and whitefish. Does not think they could arrange the season better than at present, namely, month of November. This is also the worst month for the boats to venture out.

12 to 14 years ago there were twice as many fishermen as there are now. The same fishery was carried on then as now, and no one has ever gone into the small fishing here for market. Two poor seasons 7 years ago induced some of these men to abandon the fishery. The present bad season may have the same effect. These men go into other businesses, such as farming, or anything they can get to do, and many of them never return to fishing. The reduction in the number of licenses has also reduced the number of fishermen, but this was not the primary cause.

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R. R. Finkle, Bath, Ontario.

September 23, 1893.

Justing Overseer, Amherst Island District.

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This district extends from the lower end of Amherst Island to the middle of the passage between the same island and Prince Edward Co.

It includes the waters between the mainland and Amherst Island, and off the outside of Amherst Island, as far as the fishermen in this district go to fish. The passage at the upper end of Amherst Island is called the "upper gap" that at the lower end the "lower gap."

No hoop nets or seines are used in this district.

The only nets used are gill nets.

23 licenses have been issued this year for gill nets. Rach license permits the use of 100 rods of gill netting. This is the maximum number of gill nets now allowed in this district, but this is a new restriction.

In the whitefish gill nets have been allowed to use a minimum of 4 1/2 inch, stretched mesh, but next year will not be allowed to use less than 5 inch.

These nets are used in the upper passage and outside of Amherst Island, to a maximum distance of about 7 miles. When the weather is bad, however, they cannot go out so far.

The depth of these gill nets is 12 meshes.

The Lake Ontario Fish Co. of Cape Vincent, sent boats to fish on Canadian side of line 3 or 4 months of last year, but they have not repeated this. They used a smaller mesh and the gill nets were 18 meshes deep.

About all of the fishermen in this district are fishing for the American market, having given a bill of sale of their outfit to Americans. Their fish therefore enter the United States free of duty.

A tug from Cape Vincent comes over to collect the fish twice a week or oftener.

This has been going on 2 or 3 years, ever since the passage of the McKinley bill.

This arrangement is of great benefit to the Canadian fishermen. (There has been no disposition to furnish much information on this subject.)

While the fishermen report to him that they are using not more than 100 rods of gill nets, some have much more on hand, up to 200 and 300 rods, and he fears that they sometimes may have the full amount in the water. He has no means of keeping up an inspection.

He has no doubt but that there are some men besides the 23 who are licenses, who fish outside of the island, where they are out of sight of persons who would report them. He has no means of detecting them.

The demands for licenses exceed greatly
the 23 allowed by the Government. Those whose
applications came in first were the ones who
received licenses.

Of the 23, 7 or 8 are also farmers, the balance giving all their time to fishing.

The former may not pay much attention to the business except when the fish are abundant.

The fishing season occupies on an average about 9 or 10 months of the year, including all the winter.

The ice leaves here in April, and they begin to set their nets soon after, especially in May. They are employed thence pretty constantly until the following March, when the ice becomes bad, and the nets are kept out.

The ice usually forms between Christmas and New Years. The nets are set under the ice in different ways, the poles or other arrangement being frozen into the ice or placed upon it and the nets lowered thence to the bottom.

Do not set the nets under the ice outside of Amherst Island, but in the channel inside, and in the upper gap. Set outside, however, as long as the water remains free of ice.

The market fishermen in this district do not make use of hook and line, unless it may be to a slight extent for taking maskinonge.

The heaviest catches of whitefish are made in June. They are also taken thence to November 1, and some in May. They are also caught during the winter, but the winter catch is smaller than the summer.

They fish for salmon trout on the same ground as for whitefish, but not to same extent, the former species being much less abundant. The bulk of the salmon trout are taken in this district in the fall. They are, however, caught to some extent in all the other months.

About Pigeon Island the fishery for salmon trout continues all the year.

The close season for whitefish and salmon trout is the month of November in Canada.

Eight years ago they made the largest catch of whitefish they have ever had. Could

not say anything about their abundance previous to that time. Since then they have been steadily decreasing in abundance, and during the past two years the catches have been very small.

The fishermen are inclined to think that there are cycles (not necessarily of uniform duration) in the abundance of whitefish.

Periods of occurrence of great numbers, followed by years of greater scarcity. What has become of them in the meantime, they do not know. They may be more abundant those years in other parts of the lake.

Mr. Wilmot was through here a short time ago, however, and instructed them that the whitefish planted artificially always came back to the places where planted, and the fact of their being scarce some years must show an actual depletion in their numbers.

Two years ago salmon trout were said to be as thick as they had ever been seen, on Big

Bar, off the south side of Amherst Island, but they would not net. This was in the fall 2 years ago.

As a whole, the catch of salmon trout has greatly decreased in this district. During the past 5 years the annual catch has been very small.

About the Duck Islands he has heard it said, they are still as abundant as ever.

Thinks that both salmon trout and whitefish are getting scarcer.

A good fair quantity of pickerel are taken for the market. They are captured in the 6 inch (stretched) mesh gill nets used for salmon trout. The market fishery for this species is of recent origin, and this may account for the reports that this species is becoming more abundant. They feed on the small "shad".

There is no close season for salmon trout and whitefish on the American side of the line, and the fishery continues there right through

the fall and the spawning season. There is much complaint of this by the Canadian fisher-men.

Whitefish breed throughout a large part of the Bay of Quinte.

The salmon trout breed principally off the south side of Amherst Island.

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